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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/693,116	10/24/2003	Mark S. Andreaco	25178.01	1623
22465	7590	06/10/2005	EXAMINER	
PITTS AND BRITTIAN P C P O BOX 51295 KNOXVILLE, TN 37950-1295			AHMED, SHAMIM	
			ART UNIT	PAPER NUMBER
			1765	

DATE MAILED: 06/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/693,116

Applicant(s)

ANDREACO ET AL.

Examiner

Shamim Ahmed

Art Unit

1765

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 23 May 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments filed 5/23/05 have been fully considered but they are not persuasive. Applicant's argument regards to the contents of 103(a) rejection is noted. The arguments are not persuasive because applicants fail to point out any specific subject matter, which is lacking or missing from the 103(a) rejection cited in the previous office action.
2. Examiner acknowledged that the applicant's finding of Wittry (USP No. 6,236,710) in place of Uchida et al (5,091,650) is correct. It is also noted that the body of the rejection discusses Wittry not Uchida et al.

Examiner apologies for the inadvertent, typographic error, which is corrected in the rejection below:

### ***Terminal Disclaimer***

3. The terminal disclaimer filed on 5/23/05 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of US patent 6,749,761 has been reviewed and is accepted. The terminal disclaimer has been recorded.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 1-3,7-10,12,14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Riedner et al (6,245,184) in view of Wittry (6,236,710).

Riedner et al teach a process of forming a high-resolution detector by cutting a first number of bars of scintillator with desired dimension; arranging the bars (110) in an array and laminating the bars together with adhesive and introducing a reflector material in between the two scintillator bars (col.3, lines 5-16).

Riedner et al also teach that cutting a second group of bars (118) from the formed assembly, wherein the cut is perpendicular to the bars and a reflector material (114) is disposed in between the bars (col.3, lines 16-46 and figure 5).

Riedner et al teach that laminating second group of bars together having reflector material between the adjoining scintillator bars (col.3, lines 48-63 and figure 6).

Riedner et al fail to explicitly teach the introduction of a polishing step after the cutting step.

However, in a method of manufacturing optical device, Wittry teaches after cleaving a crystal, it is important that the surface be damage free and can be accomplished by etching or polishing or mechanical polishing (col.4, lines 32-37).

Therefore, it would have been obvious to one of ordinary skill in the art at the claimed invention to combine Wittry's teaching into Riedner et al's process for providing a damage free crystal bars for efficiently laminating the bars together as taught by Wittry.

7. Claims 4-6 and 17-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Riedner et al (6,245,184) in view of Wittry (6,236,710) as applied to claims 1-3,7-10,12,14-16 above and further in view of Persyk et al (4,879,465).

Modified Riedner et al discussed above in the paragraph 6 but fail to teach forming the detector by bonding together scintillator crystals with different decay times in an alternating pattern.

However, Persyk et al teach forming a high-resolution detector by bonding two different scintillator material having distinguishable decay time in an alternate fashion (col.2, lines 11-18 and col.2, lines 65-col.3, line 3 and abstract) and such arrangement minimizing the edge packing problem.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of claimed invention to combine Persyk et al's teaching into modified Riedner et al's process for advantageously forming a detector with reduced edge packing problem as taught by Persyk et al.

***Conclusion***

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shamim Ahmed whose telephone number is (571) 272-1457. The examiner can normally be reached on M-Thu (7:00-5:30) Every Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nadine G. Norton can be reached on (571) 272-1465. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Shamim Ahmed  
Primary Examiner  
Art Unit 1765

SA  
June 7, 2005